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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,983	08/30/2001	Paul A. Farrar	1303.018US1	1908
21186	7590	03/23/2005		
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402				
			EXAMINER RACHUBA, MAURINA T	
			ART UNIT 3723	PAPER NUMBER

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/944,983	<b>Applicant(s)</b> FARRAR, PAUL A.	
	<b>Examiner</b> M Rachuba	<b>Art Unit</b> 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 14-21 and 24-92 is/are pending in the application.
- 4a) Of the above claim(s) 3, 17, 28, 40, 58, 67, 68, 76, 81 and 89 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-32 is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) 8 20 52 63 73 78 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims rejected are 1,2,4-7,9,10,14-16,18,19,21,24,25,33-36,38,39,41-47,49,51-57,59,60,62,72-75,77-80,82-88 and 90-92.

DETAILED ACTION

***Election/Restrictions***

1. Claims 3, 17, 37, 40, 58, 67, 68, 76, 81, and 89 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6 are finally rejected under 35 U.S.C. 102(b) as being clearly anticipated by Dion et al, 3,943,666, as set forth in the previous Office action mailed 20 April 2004.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 9, 14, 16, 18, 19, 21, 24, 25, 33, 35, 36, 38, 39, 41-47, 51-57, 59, 60, 72-75, 77-80, 82-88 and 90-92 are finally rejected under 35 U.S.C. 103(a) as being

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unpatentable over Shimizu, 5,827,115 in view of Dion et al '666, as set forth in the previous Office action mailed 09 September 2004.

6. Claims 10, 15, 34 and 62 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu, '115 in view of Dion et al, '666 and further in view of Bruxvoort et al, 5,958,794, as set forth in the previous Office action mailed 09 September 2004.

***Allowable Subject Matter***

7. Claims 26-32 are allowed.

8. Claims 8, 20, 52, 63, 73 and 78 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or fairly teach at least one of the polishing pad drum and the platen adapted to be linearly moved with respect to the other to move the wafer with respect to the polishing pad drum in the direction of the tangential force to throw debris in a direction toward a previously processed portion the wafer to avoid interfering with polishing during the one pass. '666 causes the debris to be thrown in a direction toward an unprocessed portion of the workpiece; '115 is silent as to the direction of rotation or how the debris is handled.

***Response to Arguments***

10. Applicant's arguments filed 22 November 2004 have been fully considered but they are not totally persuasive. Please refer to the above rejections.

11. Applicant requests clarification by the examiner to indicate where in the cited teachings would be found "rigid polishing pad". '666, figure 3, and column 4, lines 1-5 discloses that the polishing pad drum is formed of alumina or other abrasive, the materials listed being hard materials. This forms a rigid "pad" as broadly claimed. '666 does not disclose if any other material, or if any other padding is used. If applicant has a specific material, or specific structure (such as a specific material formed or wrapped around a cylindrical core or spindle) and it is supported by the specification, it should be claimed. It is noted that applicant discloses that the polishing pad drum is a solid drum, or a pad wrapped around a cylindrical core. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant further argues that the platen nor the polishing drum disclosed by '666 is adapted to be linearly moved with respect to the other, and argues that the drum does not move linearly during the process. Applicant has not claimed that the platen or drum move linearly during the process, only that one is adapted to move linearly with respect to the other. Please refer to claim 1. The drum of '666 is adapted to move linearly with respect to the platen, to move the drum into and out of contact with the workpiece. Applicant has not claimed that the drum is in contact with the workpiece during the linear motion. Again, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Regarding applicant's arguments against the rejection of claim 6, applicant argues that '666 does not disclose that the abrasive is "embedded" in the pad. The United States Patent and Trademark Office defines abrasive tools as "...all abrading (or grinding) may be said to involve a cutting action, the cutting instrument being a natural one, for example, *the sharp edges of randomly oriented crystals*," (Class Definition of Class 451, ABRADING) . '666 discloses that the tool is abrasive. In order for a tool to be abrasive, it must provide a cutting action, the cutting action being a natural one: the sharp edges of randomly oriented crystals. '666 discloses that the tool is abrasive. Therefore it must provide a cutting action as defined. '666 further discloses that the abrasive tool is made of alumina. Alumina is a known abrasive, see for example U.S. patents 3,233,369, and 4,656,790. Further, the drawings show particles on the abrasive tool. While the drawings alone would not be relied upon to show definitely the abrasive particles, the disclosure of '666, taken as a whole, anticipates the claimed invention. Therefore it is the examiner's position that the abrasive tool made of alumina must have the alumina embedded in the tool, by any method, including laminating, metal bonding, sintering, or any known method. Applicant has not claimed the material(s) of the drum pad.

13. Regarding applicant's argument that '666 does not linearly move the pad relative to the platen during polishing, the examiner agrees. However, claim 1 only limits the pad to moving linearly relative to the platen, and not only during polishing. '666 clearly discloses that the pad moves linearly relative to the platen, if only to position the pad to the platen. Those claims calling for linear motion during polishing continue to be rejected under 35 USC 103 over '115 in view of '666.

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14. Regarding applicant's arguments against the rejection of claim 8 based on '666, claim 8 was not rejected by '666 alone. Further, the examiner agrees with applicant's arguments, and those claims limiting the direction of rotation to throw debris on an unprocessed area of the workpiece have been objected to or allowed.

15. This action is made final. While some of the rejections have been withdrawn, for example the rejection of claims 51, 55 and 77 under 35 USC 102, the rejections to these claims under 35 USC 103 remain, as previously set forth in the Office action of 09 September 2004. Please refer to MPEP 706.07(a).

***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M Rachuba whose telephone number is **(571) 272-4493**. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 3:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail, can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Rachuba  
Primary Patent Examiner

Handwritten signature and date 3/21/05.